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A NEW GENUS AND NEW SPECIES OF WATER BEETLE FROM BOLIVIA WITH A KEY TO THE GENERA OF THE WESTERN HEMISPHERE COLYMBETINI (COLEOPTERA: DYTISCIDAE)[1]

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The interesting new genus and species of dytiscid beetle described below was collected in 1969 during an extended field trip in South America.

The new genus keys to the tribe Colymbetini and to the genus *Meladema* in Zimmerman's (1919) review of the subfamily Colymbetinae. In Brinck's (1948) review of the tribes of the subfamily Colymbetinae, this new genus does not key clearly to the Colymbetini because the metatarsal segments are not distinctly lobed on the outer, lower part but are feebly lobed only on the basal two segments. However, in comparing the other genera in the Colymbetinae with the new Bolivian form, I found that some other species in the tribe Colymbetini, e.g., *Rhantus vianus* Aubé and *R. validus* Sharp, possess feebly lobed metatarsal segments similar to the new genus. Because this new genus keys satisfactorily in Zimmerman's key and agrees with Brinck's analysis of the Colymbetini in all characters except the variable lobing of the hind tarsal segments, I assign this new genus to the Colymbetini.

Bunites new genus

Head large, broadest across eyes. Eyes emarginate above bases of antennae. Labrum broadly emarginate medially, with dense fringe of golden setae in emargination. Clypeus arcuate anteriorly. Maxillary palpus 4 segmented; basal segment short, about one-third length of

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second segment; second segment slightly shorter than third segment; third segment slightly shorter than fourth segment; fourth segment swollen, with a glabrous dorsal sensory region at basal third, a glabrous and depigmented lateral sensory region at apical fourth and a ventral seta-bearing area at apical third. Ligula subquadrate. Anterior margin of mentum bisinuate. Labial palpus 3 segmented; basal segment short, about one-third as long as second segment; second and third segments subequal; third segment swollen just beyond midlength (in lateral view), with 2 fine seta-bearing sensory areas ventrally at apical third.

Pronotum more than twice as wide as long; margined laterally; anterolateral angles acute, prolonged anteriorly; posterolateral angles obtuse; base narrower than base of elytra. Prosternum convex medially. Prosternal process distinctly convex; margined; apex acute, extending between mesocoxae and fitting in a deep notch in metasternum.

Elytra convex; slightly wider at apical third; base wider than base of pronotum; narrowly margined laterally. Metasternal wings broadly wedge-shaped. Metasternum with a weak longitudinal sulcus becoming deeper between metacoxal processes. Metacoxal plates broad, slightly incised along posterior margin. Metacoxal lines well separated and diverging anteriorly. Pleurite of second abdominal segment (first visible segment) with strong, transverse rugae.

Male with basal protarsal segment (Fig. 2) longer than next 3 segments combined (in lateral view). Basal mesotarsal segment shorter than segments 2, 3, and 4 combined. Pro- and mesotarsal claws long, stout, and equal in length. Metatibia with several discontinuous, medial, longitudinal rows of large aciculate seta-bearing punctures on anterior (ventral) surface. Basal metatarsal segment longest, twice as long as second segment; metatarsal segments, at most, very slightly lobed in outer lower part; outer metatarsal claw curved and shorter than straighter inner claw. Profemur stout; anterior surface swollen medially and covered with coarse, seta-bearing punctures; with a densely setose sulcus along lower, outer half near hind margin. Mesofemur similar to profemur but lacks the densely setose sulcus. Metafemur gradually widening from base to apex; anterolateral angle strongly rounded; posterolateral angle feebly rounded, almost forming a right-angle.

Parameres (Figs. 3, 6) of male genitalia broadest and curved near base, tapering to slender apices; underside densely pubescent in apical three-fourths. Median lobe curved (side view) and tip recurved (Fig. 5); slightly sinuous and cleft (Fig. 4) from midlength to apex in dorsal view.

Type of the genus: *Bunites phyllisae* new species.

Etymology: *Bunites* from bounites, G.—dweller in the hills. Gender: masculine.

The new genus *Bunites* may be distinguished from the Old World genus *Melademα* by the presence of slightly unequal metatarsal claws

and several discontinuous, medial, longitudinal rows of large aciculate seta-bearing punctures on anterior (ventral) surface of the metatibia. *Meladema* has distinctly unequal metatarsal claws and the metatibia has a medial, continuous, longitudinal stria on the anterior (ventral) surface.

The new genus may be separated from the genera of the Colymbetini occurring in the Western Hemisphere by the following key.

Key to the Genera of the Tribe Colymbetini of the Western Hemisphere

1. Prosternal process flat; dorsal surface of beetle unusually flat; pronotum widely margined laterally; elytra lightly reticulate throughout, meshes rather coarse, unequal, and irregular in shape; North America ..... *Hoperius* Fall

   Prosternal process convex or carinate, not flat; pronotum margined or not; elytra coarsely or finely reticulate or with transverse grooves 2

2. Elytral sculpture consisting of many parallel transverse grooves; apex of metasternum strongly depressed and indistinctly notched for apex of prosternal process; North America ..... *Colymbetes* Clairville

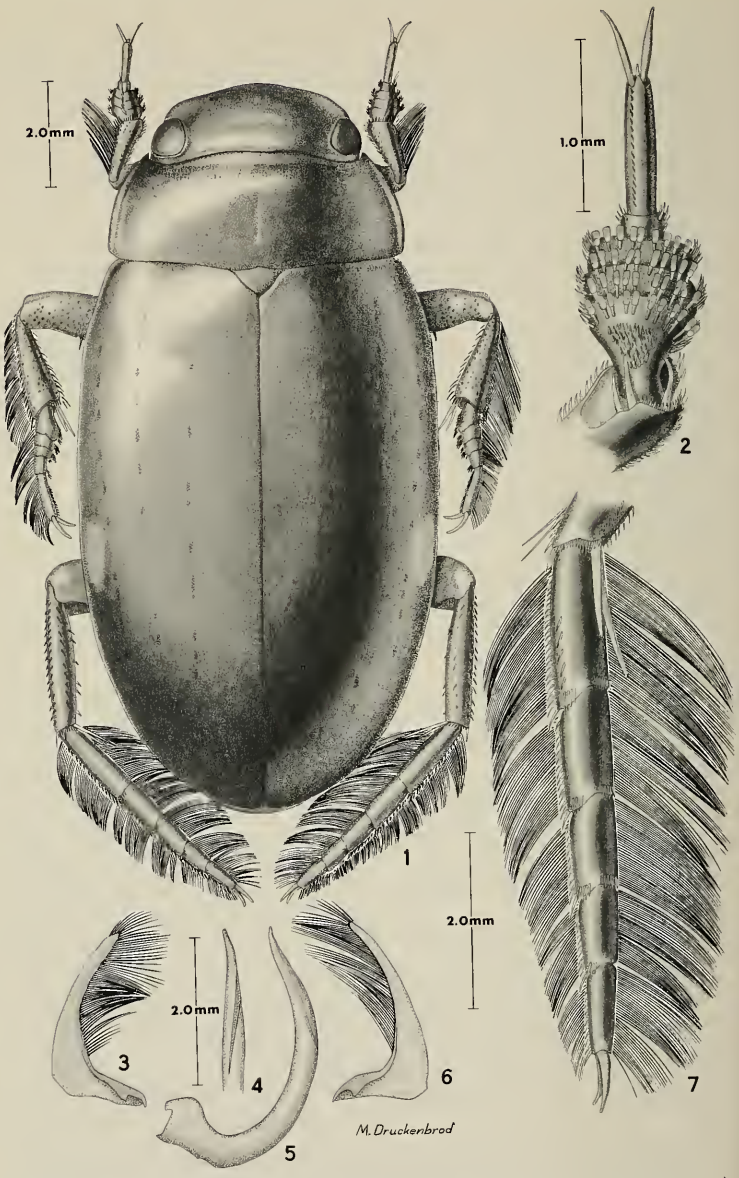
   Elytra without transverse grooves, reticulate; apex of metasternum slightly or not depressed but distinctly notched for apex of poststernal process 3

3. Body form ovate; sides evenly arcuate, uninterrupted; sides of pronotum continuous with elytra; base of pronotum same width as base of elytra; pronotum usually margined; color usually not black; North, Central, and South America ..... *Rhantus* Dejean

   Body form oblong; sides not evenly arcuate, interrupted; sides of pronotum not forming a continuous arc with elytra; base of pronotum narrower than base of elytra; pronotum margined or not; color black 4

4. Pronotum without lateral margin, posterolateral angles acute; elytral reticulation coarse; apex of prosternal spine fits into a shallow notch on apex of metasternum; front tibia incised on inner side at base, strongly so in male; metatarsal segments distinctly lobed on outer, lower part; North America ..... *Neoscutopterus* J. Balfour-Browne

   Pronotum with lateral margin, posterolateral angles obtuse; elytral reticulation fine; apex of prosternal spine fits into a deep notch on apex of metasternum; front tibia not incised on inner side at base; only basal 2 metatarsal segments moderately lobed on outer, lower part; South America ..... *Bunites* Spangler



FIGS. 1–7. *Bunites phyllisae* new genus, new species, ♂ holotype: 1. habitus, dorsal view; 2. left protarsus, ventral view; 3. right paramere, medial view; 4. apex, median lobe, dorsal view; 5. median lobe, lateral view; 6. left paramere, medial view; 7. right metatarsus, ventral view.

Bunites phyllisae new species

Figures 1–7

Holotype male: Length 14.00 mm, greatest width 6.50 mm at apical third. Color of head, pronotum, and elytra piceous except transverse, reddish-yellow macula on middle of head between eyes and short longitudinal, reddish-yellow macula near lateral margin slightly behind midlength on elytron. Epipleuron dark reddish brown. Ventral side of body piceous except metacoxae, posterolateral margins of third, fourth, and fifth abdominal sterna, middle two-fourths of sixth sternum, and last 3 or 4 antennal segments dark reddish brown.

Head finely alutaceous; with numerous, fine punctures scattered over surface, punctures separated by a distance of 1 to 4 times their diameter; with a deep, short, setose, transverse sulcus at anterolateral angle adjacent to labrum; with a few coarse punctures along margin of clypeus between sulci; also a row of coalesced punctures along inner margin of eye, another shorter group of punctures along frontoclypeal suture and a few coalesced punctures between eye and frontoclypeal suture. Clypeus arcuate anteriorly. Labrum finely alutaceous and finely, sparsely punctate; broadly emarginate medially, with dense fringe of golden setae in emargination. Ventral surface of head microreticulate laterally behind eyes; ligula subquadrate and smooth except for a few fine punctures on surface; mentum bisinuate along anterior margin, surface weakly rugose medially, finely alutaceous laterally, with few coarse shallow punctures. Antenna 11 segmented, basal segment longest, second segment shortest, remainder subequal. Maxillary palpus 4 segmented; basal segment short, about one-third length of second segment; second segment slightly shorter than third segment; third segment slightly shorter than fourth segment; fourth segment swollen, with a glabrous dorsal sensory region at basal third, a glabrous and depigmented lateral sensory region at apical fourth and a ventral seta-bearing area at apical third. Labial palpus 3 segmented; first segment short, about one-third as long as second segment; second and third segments subequal; third segment swollen just beyond midlength (in lateral view), with 2 fine, seta-bearing, ventral sensory areas at apical third.

Pronotum more than twice as wide as long; surface sculpture similar to that of head but with numerous very coarse punctures adjacent to anterior and lateral margins and a few near posterior margin; margined laterally; anterolateral angles acute, prolonged anteriorly; posterolateral angles obtuse; base narrower than base of elytra; underside of anterolateral angles with a tuft of long golden setae. Prosternum convex medially. Prosternal process distinctly convex, margined, apex acute, fitting in a deep notch in metasternum between mesocoxae.

Elytra convex; slightly wider at apical third; base wider than base of pronotum; finely margined laterally; surface finely alutaceous, with numerous fine punctures scattered over surface, punctures separated by a distance of 4 to 10 times their diameter; with 3 well-defined serial rows

of coarse, seta-bearing punctures on discal area and lateral margin with a row of smaller, poorly defined punctures. Scutellum broadly triangular, twice as wide as long, finely alutaceous. Ventral surface of meso- and metathorax finely alutaceous and rugose. Metasternal wings broadly wedge-shaped with an arcuate series of coarse punctures just behind mesocoxal cavity. Metacoxal plate broad, with fine, widely spaced punctures in addition to alutaceous sculpture. Metacoxal processes separated by deep sulcus, margined laterally, each with a posterior incision; surface smooth except for few, fine punctures. Metacoxal lines distinct posteriorly, diverging and disappearing anteriorly. Abdominal sterna 3, 4, and 5 each with a coarse, medial puncture bearing a tuft of long golden setae; each with a weak, transverse row of fine seta-bearing punctures laterad of medial puncture; posterior three-fourths of last sternum strongly strigose. Second abdominal pleurite with strong, transverse rugae.

Legs finely alutaceous. Profemur stout, anterior surface swollen medially and covered with coarse, seta-bearing punctures; with a densely setose sulcus along lower, outer half adjacent to hind margin of tibia in repose; lower edge with fringe of short, stout, golden setae on proximal half. Protibia gradually widening distally; anterior surface with many coarse, seta-bearing punctures and a dense serial row of similar punctures close to lateral edge of tibia. Protarsus (Fig. 2) with first segment broadened, with basal tuft of golden hairs and 2 apical rows of 10 or 11 golden setae each with a rectangular sucker at apex; second and third segments broadened, each with a row of 8 to 11 golden, sucker-bearing setae; first segment longer than next 3 segments combined (in lateral view); second, third, and fourth segments subequal; fifth segment elongate, longer than segments 2, 3, and 4 combined; claws long, stout, and equal in length.

Mesofemur similar to profemur but lacks the densely setose sulcus. Mesotibia similar to protibia but lacks the serial row of seta-bearing punctures and is more densely covered with coarse, seta-bearing punctures on anterior surface. Mesotarsus with first segment broadened, with sucker-bearing setae; first segment shorter than segments 2, 3, and 4 combined; second and third segments subequal; fourth segment about a fourth longer than third segment; fifth segment about a fourth shorter than combined length of segments 1 through 4; claws long, stout, and equal in length.

Metafemur gradually widening from base to apex; anterolateral angle strongly rounded; posterolateral angle feebly rounded, almost a right-angle; anterior (ventral) surface finely alutaceous along anterior edge, also finely, sparsely punctate except a cluster of 10 to 12 large, coarse, seta-bearing punctures in posterolateral angle. Metatibia finely alutaceous; anterior (ventral) surface with a regular row of coarse seta-bearing punctures along lateral and medial edges; with several medial, discontinuous rows of large aciculate seta-bearing punctures on anterior (ventral) surface. Metatarsus (Fig. 7) with segments, at most, very feebly

lobed in outer lower part; basal segment longest, twice as long as second; segments 2, 3, and 4 subequal; fifth segment slightly more than half as long as first; outer claw curved and shorter than straighter inner claw.

Female: Similar to male except pro- and mesotarsus not broadened, lacking sucker-bearing setae, basal segments only as long as second and third segments combined. Tarsal claws and comparative lengths of metatarsal segments similar to male. Setose sulcus along lower, outer half of profemur reduced to a single row of golden setae. Last abdominal sternum weakly strigose posterolaterally.

Variations: Specimens vary in length from 13.00 to 14.00 mm and in width from 6.00 to 7.00 mm. The reddish-yellow elytral maculae are lacking on one paratype and are extremely reduced on two others.

Type-data: Holotype, ♂, Bolivia, Department of Cochabamba, Cochabamba (48 km. N.), 10 May 1969, Paul and Phyllis Spangler. USNM Type No. 70837, deposited in the National Museum of Natural History. Allotype: Same data as holotype. Paratypes: 12♂♂, 2♀♀, same data as holotype and 1♂ from Bolivia, Pongo de Quime, July, W. M. Mann, Mulford Biol. Expd., 1921–22.

Habitat: The specimens from 48 km. north of Cochabamba were collected from a pool about 6 feet long, 3 feet wide, and 1 foot deep in a springgutter that drained into Corani Dam. The vegetation at this elevation (about 9,000′) was typical puna grassland. No larvae were found.

Etymology: I take great pleasure in naming this new species for my wife in appreciation for her years of generous assistance with all aspects of my entomological endeavors.

Literature Cited

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